

HAINES BOROUGH ALASKA

RESPONSE TO REQUEST FOR PROPOSALS
Lutak Dock Design and Development Concepts
Due : September 2, 2016

KPFF Consulting Engineers
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September 2, 2016

Mr. Brad Ryan, Director of Public Facilities
Haines Borough
Borough Clerk's Office
103 Third Avenue South
Haines, AK 99827

Re: Lutak Dock Design and Development Concepts
Response to Request for Proposals

Mr. Ryan & Selection Committee:

Projects like the Lutak Dock replacement can be a catalyst to bring together community if completed in an open and collaborative manner. The KPFF Team is proposing to bring to your project individuals with marine infrastructure design expertise coupled with excellent inter-personal skills to help you successfully rebuild the Lutak Dock in a way that will bring the community of Haines together.

From KPFF, we have two Principals assigned to this project, Bob Riley and Scott Kuebler, who co-manage KPFF Special Projects' Marine Structures group. This is a group of highly talented and innovative engineers who work on marine structures all over the country. Bob, who is currently managing the Gateway project for the Municipality of Skagway, will manage this project. Supporting Bob will be Scott Kuebler, Ed DeBroeck and Bruce Erickson, all of whom have spent the better parts of their careers designing waterfront structures and deep foundations.

Supporting KPFF will be Garry Horvitz from Hart Crowser for geotechnical engineering and Ben Haight of Haight & Associates for electrical engineering. Both of whom have experience in SE Alaska, and specifically in the Lynn Canal.

You will see from this proposal that our team brings innovative ideas to the table that will allow the Haines community a variety of options to deliberate over to allow you to decide what's best for your community. Replacing a cellular cofferdam structure can be a risky venture. Engaging with a firm that helps you to reduce your risk while replacing the dock in a cost effective manner would seem to be of utmost importance to the Haines Borough. We believe we have assembled a team that can help you do that in an open and collaborative manner by giving you and the community the information you will need to help you decide what's best for your future.

We are committed to working with you on this project for the established fees as stated in the RFP and look to continue the good work we have been doing for the communities within the Lynn Canal. Please let us know if we can provide any additional information that will help you decide which team is best suited for the Lutak Dock replacement design.

Sincerely

A handwritten signature in black ink, appearing to read 'Bob Riley', written over a horizontal line.

Bob Riley, PE, SE
Principal & Project Manager

Qualifications Statement



1. Team Name and Licenses

KPFF Consulting Engineers
Alaska License# 297858

Hart Crowser
Alaska License# 231245

Haight & Associates
Alaska License# 291165

KPFF will obtain a Haines Borough business license upon notice of contract award as necessary.

2. Firm History

In business for almost 60 years, KPFF is one of the largest full-service civil and structural engineering firms on the West Coast. KPFF Consulting Engineers provides deep and diverse resources and exceptional technical expertise. More importantly, we have learned that successful interaction requires personal involvement by senior resources combined with energy, commitment, and ownership of project goals. KPFF is headquartered in Seattle, WA and has almost 1,000 employees with over 600 engineers on staff.

KPFF's Special Projects Division has established its place as a leader in waterfront structural designs, with over 20 years of experience with planning, designing, and managing construction of port and harbor projects for port authorities, other government agencies, shipping lines, stevedoring companies, industry, and private clients in the United States and abroad. Core capabilities include marine engineering, structural/civil engineering, dredge design, wharf design, construction management services, permitting, and the project management and planning experience to conduct these services efficiently. Our projects have included marine terminals and infrastructure to support those facilities.

3. Similar Project Experience

For similar project experience, see Section 1.

4. Past Performance on Similar Projects

For past performance information and references, see Section 4.

5. Similar Area Experience

KPFF has been providing structural and civil engineering services to government and private clients in Alaska since 1964. KPFF has provided engineering services for more than 100 different projects throughout Alaska, including a new cruise dock in Ketchikan, a wharf and container yard in Kodiak and additional projects in other locations such as Seldovia, Valdez, Dutch Harbor, Juneau and Shemya.

We are familiar with the special environmental problems created by the extreme temperatures, high wind and waves, permafrost, ice, heavy snow, and strong earthquakes encountered in Alaska. In addition, we understand the special logistic demands of construction projects at remote sites. KPFF gives careful planning and attention to simplicity and detail in design because all are vital to the success of these projects.

Our proposed project manager, Bob Riley, has completed a number of projects in Southeast Alaska, as highlighted by his bio in Section 1 and resume in the appendix. KPFF is currently under contract with the Municipality of Skagway for the design of their Gateway project; with ADOT to perform inspection of the 270 foot Captain William Moore Creek Bridge in Skagway; and we are designing a major upgrade to the Ketchikan General Hospital.



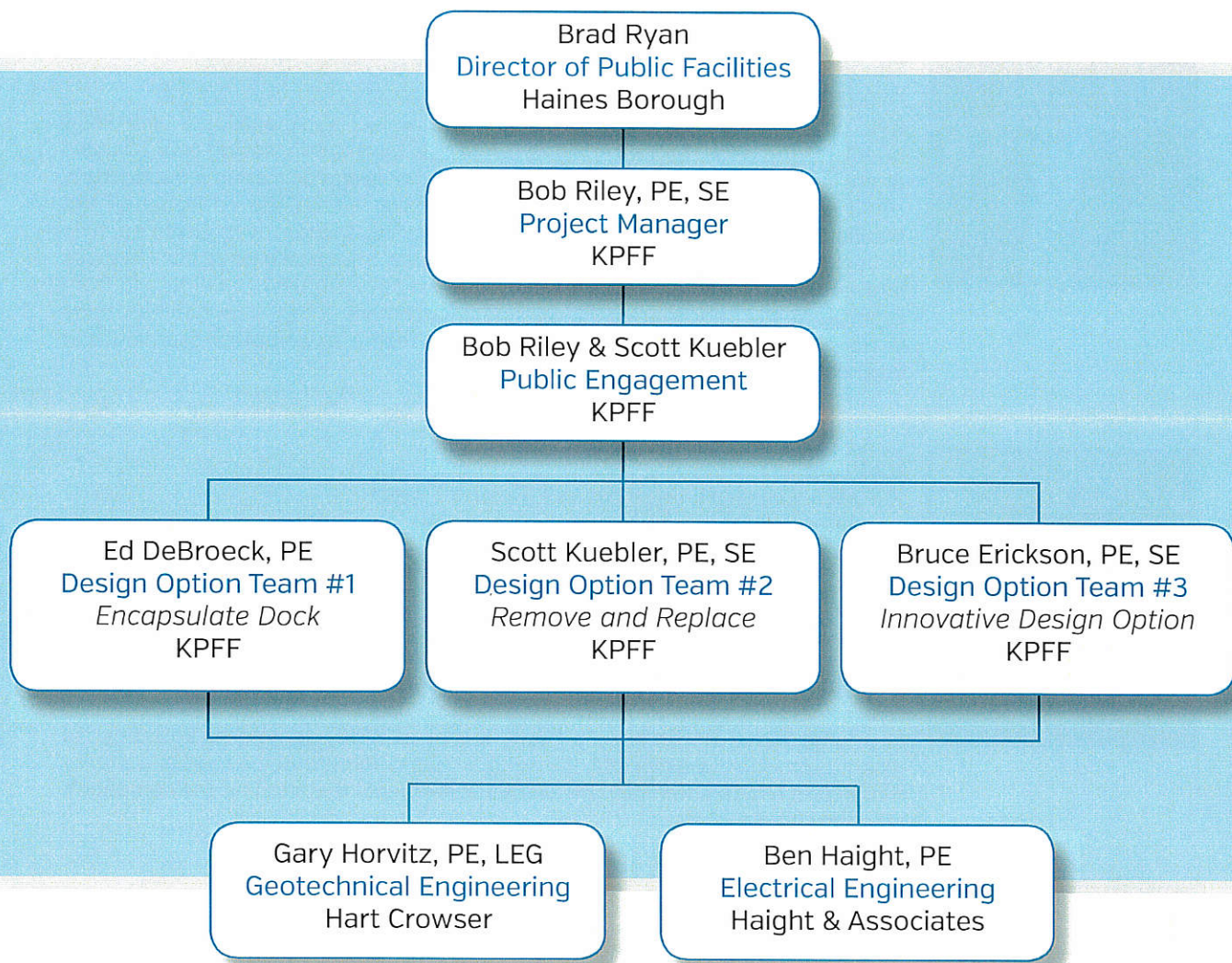
Skagway Ore Dock, Port of Skagway, AK

HAINES BOROUGH ALASKA

Request for Proposals - Lutak Dock Design and Development Concepts

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1. Qualifications and Experience



As the prime consultant for the design work, KPFF will have overall responsibility for the execution of the design effort. Within KPFF, Bob Riley will be the Project Manager and lead the Public Engagement process. As such, he will be responsible for ensuring adequate resources are provided to execute the project on schedule. In this role, he will be responsible for coordination with Hart-Crowser and Haight & Associates for Geotechnical and Electrical engineering criteria respectively.

On the following pages are brief bio's of our proposed team. Complete resumes for all team members are attached in the Appendix.

1. Qualifications and Experience



Bob Riley, PE, SE

KPFF I Project Manager/Public Engagement

Education: BS, Architectural Engineering, University of Colorado at Boulder

Registrations: Civil Engineer: AK, WA, OR, CA, MA; Structural Engineer: WA, CA

KPFF is proposing Bob Riley to manage the project and participate with Scott Kuebler in the public outreach. Bob is well suited for this role, having over 20 years of engineering experience and specializing in the design of marine infrastructure. He is a licensed Professional Engineer in Alaska, and is the co-leader of the Marine Structural Group at KPFF's Special Projects Division with Scott Kuebler. His experience in managing the on-going Gateway Intermodal project in Skagway makes him well suited for this role, as he is very familiar with travel to and from Lynn Canal and understands the working environment in this area. Bob has many years of experience leading multi-disciplined teams to complete planning and engineering projects.



Ed Debroeck, PE

KPFF I Design Option #1 Team Lead

Education: BS, Civil Engineering, Seattle University

Registrations: Civil Engineer: WA, CA

Ed DeBroeck has spent his 8 year career entirely focused on the design of new and rehabilitated marine structures. Ed is well suited to lead the design effort for the Dock Encapsulation option due to his recent experience in the design of two very similar systems in Gulfport, Mississippi and Coos Bay, Oregon. Both projects required working within the constraints of an existing dock in need of repair, and both solutions required the use of a new tall bulkhead wall at the face of a large vessel berth. Ed is a future leader at KPFF, as demonstrated by his recent promotion to Associate, meaning he has demonstrated a level of maturity that allows him to enter into contractual agreements that commit the company's resources to our clients.



Scott Kuebler, PE, SE

KPFF I Public Engagement/Design Option #2 Team Lead

Education: MS/BS, Civil Engineering, Washington [Structural Emphasis] State University

Registrations: Civil Engineer: WA, OR, MS, CA; Civil Engineer: WA, OR, CA

Scott has 19 years of experience in the design and project management of a wide variety of structures built in the marine environment, including condition assessment and retrofit construction of waterfront structures for deep-water port facilities. Scott will lead the Option 2 Design Team and will work with Bob Riley to facilitate public outreach for the Lutak Dock project. Scott has spent the majority of his career involved in marine projects that require extensive coordination between designers, the Owner, and other project stakeholders in various roles from prime consultant project manager to specialty consultant. Scott also recently played a key role in a number of public outreach meetings for a proposed new marine fueling station at the Port of Olympia, WA. His role in these meetings was to convey project background, criteria, constraints, and the various design alternatives considered in a manner that is easy for the public to understand and that facilitates feedback. Scott has repeatedly demonstrated his ability to work with diverse groups of project stakeholders to develop pragmatic and cost effective designs that reduce project cost, are constructible, and serve the desired function of the end-user.

1. Qualifications and Experience

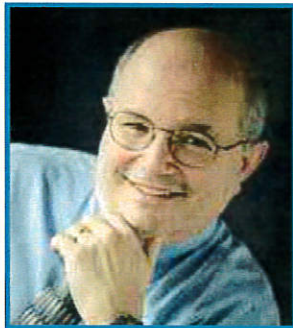


Bruce Erickson, PE, SE **KPFF I Design Option #3 Team Lead**

Education: BS, Civil Engineering, Northwestern University

Registrations: Civil Engineer: WA; Structural Engineer: WA

Bruce Erickson has over 30 years of experience providing structural engineering services for a variety of waterfront, shoring, building, tunnel, and bridge projects. He is an expert in the design, evaluation and retrofit of bulkheads, seawalls, shoring and retaining wall systems. Bruce has designed docks, piers, and wharf structures for the US Navy, Washington State Ferries, and Puget Sound area ports. For the US Navy Bangor Delta Pier Cofferdam Repairs project, Bruce oversaw the creation and performance of a team that was able to produce a high-quality design for a technically challenging project on an accelerated schedule. For their successful completion of this design, Bruce's team received the highest rating of "exceptional" from the Navy.



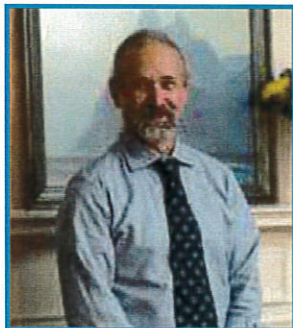
Garry Horvitz, PE, LEG **HART CROWSER I Geotechnical Engineer**

Education: MS, Civil [Geotechnical] Engineering, Massachusetts Institute of Technology

BS, Civil Engineering, State University at Buffalo

Registrations: Professional Engineer: AK, WA, OR, HI

Garry Horvitz is a senior-level geotechnical engineer who is experienced with projects in SE Alaska. During more than 40 years of experience, he has developed unparalleled knowledge of geotechnical aspects of waterfront development, including piers and wharves, dredging, breakwaters, infrastructure, and upland facilities. Often Garry's projects involve redevelopment, renovation, or reconfiguration of existing facilities.



Ben Haight, PE **HAIGHT & ASSOCIATES I Electrical Engineer**

Education: BS, Electrical Engineering, Washington State University

Registrations: Electrical Engineer: AK

Ben Haight will lead the project electrical team. He will support the HAI staff effort, providing them with technical guidance and facilitate quality assurance. Ben has over 43 years of electrical engineering experience, and has been practicing in Alaska since 1975. As the principal of the firm, he provides technical guidance to his staff and clients, oversees quality assurance of all project work, ensures compliance with contract requirements, and maintains vigilance of project and work schedules. Ben participates in the design and construction of electrical systems for harbors, docks and marinas, with experience extending through most of his career. The projects have involved lighting, power distribution, security cameras, metering, grounding, and various shore power configurations.

1. Qualifications and Experience

DESIGN OPTION 1 EXPERIENCE: ENCAPSULATE DOCK



Ocean Terminals Bulkhead Wall, North Bend OR

The Ocean Terminals Bulkhead Wall Project involved the design of a new 59 foot tall tied back bulkhead wall covering a 100' wide by 500' long area. The bulkhead was built around an existing 1970's era timber dock that had passed its useful life. The site is an active log ship loading and unloading facility and the new wall construction had to be phased to allow for continuous operations during construction. This was accomplished using a custom fabricated steel king pile structural system comprised of cold form JZ sheets welded to HP piles that were driven just outside of the timber dock perimeter. The use of this custom structural system required extensive iterative analyses as KPFF worked closely with the Owner to use materials that were available locally to shorten the construction schedule. The dock was then demolished in between ship loading operations and then the interior was backfilled with 50,000 cubic yards of fill.

Key Team Members: Bob Riley, Ed DeBroeck



West Pier Wharf Conditions Assessment, Load Rating Analysis and Crane Rail Upgrade, Port of Gulfport, MS

KPFF performed the civil and structural design for the upgrade of approximately 3,700 linear feet of existing wharf to accommodate new 100-gauge crane rails capable of serving Post-Panamax vessels as part of the Port of Gulfport Restoration Plan following Hurricane Katrina.

Crane Rail Upgrade: The existing wharf actually consisted of three separate wharf types at a bulk handling facility which previously did not support gantry cranes at all. Two of the wharf types were traditional concrete aprons (cast-in-place decks on concrete piling), but the third was a tied-back, king-pile head wall outboard of an existing deteriorating cellular cofferdam.

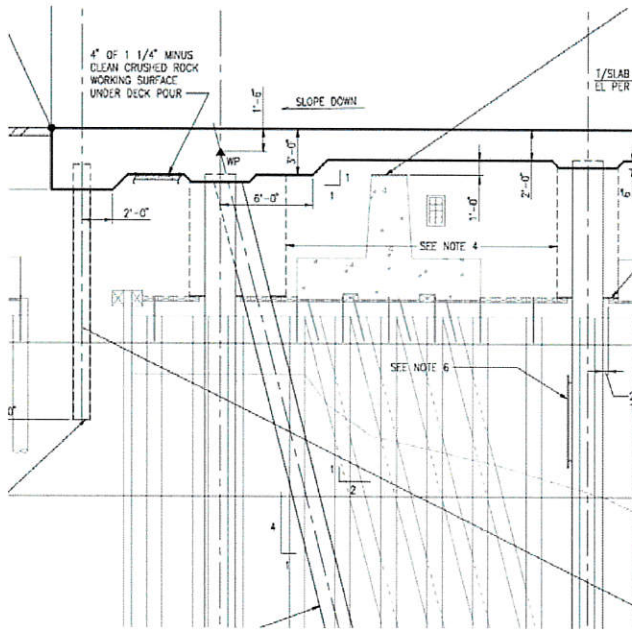
Berth Deepening Toe-wall: In order to accommodate future berth deepening to a depth of 45' (limited by future anticipated dredging of Port approach channel), approximately 950 linear feet of wharf required a 20' under-water sheet-pile toe-wall at the face of wharf.

Terminal Planning: KPFF also supported the local prime consultant with the terminal planning for their upland civil design for the 140-acre terminal replacement.

Key Team Members: Scott Kuebler, Garry Horvitz, Ed DeBroeck

1. Qualifications and Experience

DESIGN OPTION 2 EXPERIENCE: REMOVE AND REPLACE



Shipyard Pier Design, Philadelphia, PA

Wharf and Pier F in the Philadelphia Navy Yard were timber pile supported structures with a paved surface on approximately 8' of fill on a timber relieving platform. To minimize cost and construction schedule, KPFF developed a design for a new pier built on and through the existing structures. By leaving the existing structures in place, most of the new pier was able to be built using land-based equipment. Because the new structure was independent of the existing structure, as the deterioration continued and failures occurred, they would not impact the structural integrity of the new pier.

Key Team Members: Bruce Erickson, Bob Riley



Pier 4 Reconfiguration, Port of Tacoma, WA

KPFF is working with the Port of Tacoma on this \$120M project to remove and reconstruct an existing concrete pier to accommodate up to two Ultra Large Container Ships and eight 100-foot gage, 24-box wide container cranes. Pier 4 has historically served much smaller container ships and barges and will be upgraded to handle 18,000 TEU vessels. An unusual kinked pierhead line configuration, a waterway width restriction, a 64-foot gauge crane rail system, and mooring and berthing components sized for smaller vessels require a complete reconfiguration of Pier 4. Combined with adjacent Pier 3, the facility will provide 3,000 feet of deep-draft berth length along the Blair Waterway. KPFF is serving as the Prime design consultant and providing Project Management, structural & civil engineering, surveying, and cost estimating services. KPFF is also managing a number of subconsultants, including geotechnical engineering, mechanical engineering, electrical engineering, and an architect.

Key Team Members: Scott Kuebler, Garry Horvitz, Ed DeBroeck, Bob Riley

1. Qualifications and Experience

DESIGN OPTION 3 EXPERIENCE: ALTERNATIVE SOLUTIONS



Bangor Delta Pier Repairs, Silverdale, WA

The Delta Pier cofferdams support the maintenance and repair of nuclear submarines, both pierside and in dry dock. Repairs to the cofferdam sheet piles were needed to stop the existing corrosion and extend the service life of the facility. To protect the cofferdams, a concrete fascia was installed from an elevation of -2.0' MLLW to the top of the cofferdam, elevation 20.0'. The concrete fascia was reinforced, cast-in-place concrete, designed to withstand all environmental forces, including seismic, wave, and deck loads.

Key Team Members: Bob Riley, Bruce Erickson



Chevron Bahia Las Minas, Colon, Panama

KPFF provided structural engineering services for analysis and load rating of a highly utilized tanker berth located at Chevron's Bahia Las Minas Refueling terminal near Colon, Panama. The tanker berth was originally constructed in the 1960's and consists of three separate circular sheetpile caisson structures that serve to accommodate tanker vessels that call at the fuel storage facility. A significant amount of deterioration of the steel plating and welding that comprises each of the caissons was recorded during multiple dive inspections performed between 2009 and 2012. KPFF's scope of work consisted of performing a load rating and service life analysis of the deteriorated caissons to evaluate their ability to serve as intended. Existing conditions were defined based on information gathered through review of available record information and previous dive inspection reports. The analysis consisted of comparing remaining capacity of the deteriorated caissons to stress demands imposed by a number of berthing scenarios. Results were presented in terms of maximum allowable berthing velocities for three different size vessels that call at the facility. Repair concepts and costs were also developed and prioritized based on urgency for implementation.

Key Team Members: Bob Riley, Scott Kuebler



2. Past Performance

MUNICIPALITY OF SKAGWAY

Scott Hahn, Borough Manager;
[907] 983-2297
s.hahn@skagway.org

WETA

Mike Gougherty, Senior Planner
[415] 364-3189
gougherty@watertransit.org

VIGOR SHIPYARD

[formerly Todd Pacific Shipyards]
Paul Torrey, Director of Facilities & Logistics
[206] 623-1635, ext. 453
Paul.Torrey@vigorshipyards.com

BANGOR DELTA PIER

"ACASS RATING "EXCEPTIONAL"

Ernie Berg
US Navy, Naval Facilities Engineering Command
NW Silverdale
[425] 304-3565
[See appendix for copy of KPFF's Performance
Evaluation by the Navy]

PORT OF TACOMA

Trevor Thornsley, PE
[253] 383 9408

QUALIFICATION REFERENCES

"As we have now accomplished a significant milestone with the completion of the Pier 4 Phase 1 Removal Action, we would like to take the opportunity to express our appreciation for work accomplished to date by the KPFF staff. The Pier 4 Reconfiguration was initiated in 2012 with the retainage of KPFF as the design engineer. The KPFF inherent knowledge of marine structures was key in defining the various design criteria and alternatives associated with the project. Upon completion of the Conceptual Design Report and Basis of Design Report, the project's scope, schedule and budget were sufficiently defined to allow for our executive staff and Commissioners to authorize continuation of the design phase. At all times, (the KPFF Staff) have continued to keep the Port's best interest in mind while actively maintaining the ever-changing scope, schedule and budget."

Pier 4 Reconfiguration I Port of Tacoma,
Trevor Thornsley, PE, Senior Project Manager
TTHORNSLEY@portoftacoma.org

"KPFF completely understood our key decision points on the project and exhibited continuously exceptional and creative solutions and alternatives to suit our needs. I would not hesitate to rely on KPFF for new projects in the future. We are very pleased across the board."

Robert Gilbert, PE, Todd Pacific Shipyards

ACASS Rating "Exceptional"

Quality of Work

"KPFF did an overall exceptional job on this contract. Responses to NAVFAC requests were quick and accurate."

"KPFF delivered a quality product in their construction plans, specifications, construction schedule and cost estimate."

Schedule Compliance

"Schedules were always met on time. The KPFF team demonstrated an innovative approach to the problems associated with the complicated schedule stretching over three in water work seasons"

Ernie Berg, US Naval Facilities Engineering Command NW,
Silverdale, WA

"I want to thank KPFF for being on top of all of the issues during construction, keeping me inform of critical issues, and bringing different team members to resolve challenges."

Ticson Mach, Port of Seattle



HAINES BOROUGH ALASKA

Request for Proposals - Lutak Dock Design and Development Concepts



3. Draft Scope of Work

Replacing a critical piece of infrastructure that is the life-blood of a community can be a daunting task. The entire community of Haines relies on the **Lutak Dock** for everything from gas to milk to the latest computer hardware. Our team has experience in working with communities who have vital interests in these pieces of infrastructure and we understand the importance of going through a public process to come to a consensus. The key to building consensus is developing trust, and this is accomplished by making sure that everyone's opinion is heard. The thing about making a decision is that not everyone is going to like it – but if everyone gets a chance to voice their opinion and feels like the process of coming to a decision was done in an open and collaborative way, generally there will be consensus around the final outcome.

Our team is well suited to help guide the Haines community through a public decision making process. The two lead facilitators that we are proposing, **Bob Riley** and **Scott Kuebler**, are both senior marine engineers and Principals at KPFF. In their role as Principals, they are responsible for being the public face for KPFF, often speaking at public meetings and community gatherings about technical and non-technical subjects, making each of them very comfortable speaking in a public setting. They also each have experience leading projects from inception through completion, which often requires gathering stakeholder input and support to ensure that the selected preferred alternative meets the stakeholder's goals and interests for each project.

We recognize that members of the community have various levels of comfort in speaking out in a public setting. It is important to meet people at their level of comfort, because everyone's input is valued.

Our public outreach process will be multi-pronged. We have found that there are multiple ways to gather input. In a public meeting, there can be an "open mic" format, allowing people to publicly voice their opinions; or comment cards can be used to allow for some anonymity; targeted information booths set around the room can be staffed by KPFF and Borough public works staff that each may present different types of project information, such as technical design aspects, operational impacts, and financial attributes. These booths allow for one on one conversation as a way to obtain public input.

We would suggest setting up an outreach website hosted by the Borough where information about the project can be posted and an on-line questionnaire/survey can be used to get further community input. It will also be important to have meetings with the Borough and the dock tenants to gain a thorough understanding of their operational needs and constraints.

All of the input gathered through these processes will be recorded and made public for all to see. To build consensus, this process has to be an open one to build trust amongst the stakeholders.

However, before the stakeholders can make a decision about what to build to replace the dock, options for replacement need to be defined. KPFF is also well suited to help the Haines community develop low risk, cost effective options for dock replacement. Our experience in dock design is diverse and the people of Haines will greatly benefit from this diversity of experience. The team of engineers we have assembled to help you have experience with design of concrete wharves, steel docks, floating structures, large bulkheads built from sheet piles, soldier piles and concrete walls; we also have experience with design of ground improvements from stone columns to jet grouting to ground freezing and experience with construction of huge below grade structures that required the use of reinforced slurry walls to build a 100 feet deep railway station, giving us experience with design of below grade walls which may be an option for a replacement dock in Haines.

All of these structure types were constructed in high seismic areas, demonstrating our capability in the design waterfront structures to meet seismic design standards in high seismic areas. In fact, one of our key team members sits on the national committee that writes the design standard for seismic design of piers, wharves and bulkheads. You will see from this proposal that we have assembled a team of waterfront structure design experts, who also have the ability to communicate clearly and effectively with the community to present the risks and opportunities that each dock replacement option will provide.

3. Draft Scope of Work

DOCK REPLACEMENT OPTIONS

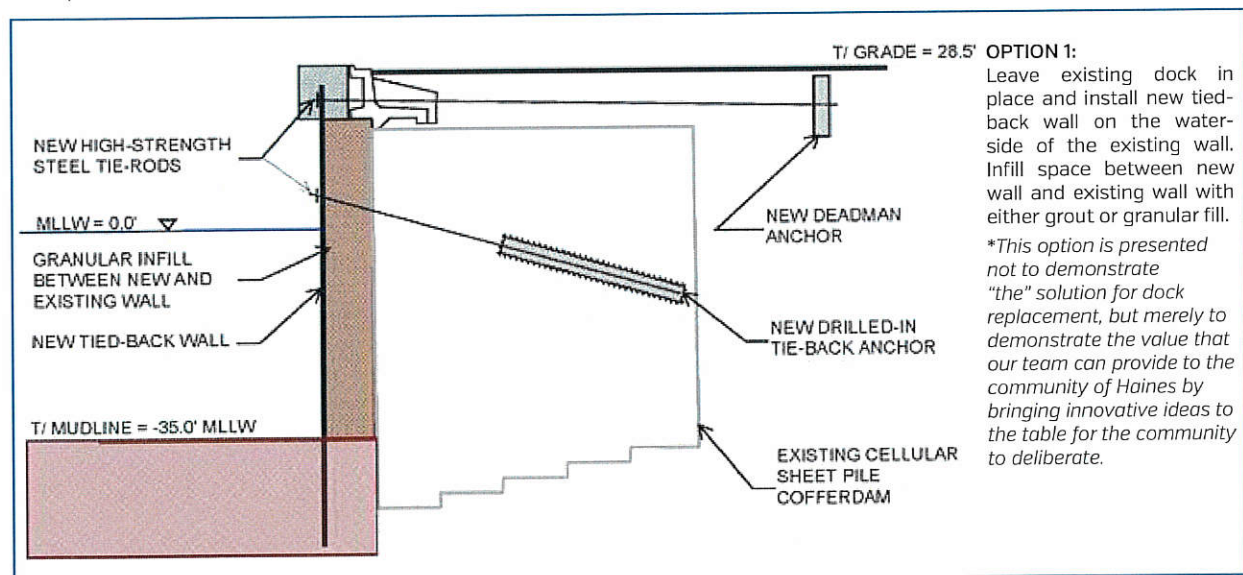
We understand that the Borough would like the successful proposer to develop three conceptual designs for replacement of the Lutak dock. Our approach to this effort is to create three separate design teams within KPFF that would run in parallel, each led by a senior engineer experienced with that type of dock construction. This approach allows us to be efficient in the creation of conceptual designs, but also provides strength by having many senior engineers working on the same project to generate multiple innovative ideas for design. **This innovative collaboration can already be seen in some of the dock replacement options we present below.**

As you are aware, the existing dock structure is comprised of circular steel sheet pile cofferdams that rely on hoop stress tension for their structural integrity. Breaking the hoop stress by either driving new structure through the circular hoop or removing a section of the circular sheet pile without removing the soil loading first would be a very risky approach to construction. In our opinion, the least risky option to dock replacement is one that leaves the existing structure intact and in-place – this provides the added benefit of reduced disruption of dock operations during construction, as the alternative would be to completely demolish a portion of the dock before building a new section of dock.

Therefore, all of our proposed solutions for dock replacement are focused on leaving the existing cofferdam structure in place.

Option 1 – Dock Encapsulation Concept

For this option, we would propose installing a new wall waterside of the existing dock. Due to the height of this wall (almost 65'), it would need to be tied-back, likely with two rows of tie-backs. The upper row of tie-back rods could be installed above the top of the existing cofferdam sheet piles and connect to a dead-man anchor placed behind the existing cofferdam structure. The lower row of tie-backs would likely be drilled into the soil at low tide and grouted to the surrounding soil within the confines of the existing cofferdam. Small diameter holes could be cut into the front face of the sheet pile cofferdam to allow the lower tiebacks to be drilled into place; however drilling through the back wall of the steel cofferdam would likely be difficult, which is why the lower tie back would need to be designed to stay within the confines of the cofferdam. This approach is very similar to a project we recently completed in Coos Bay, Oregon for a private timber exporter. Team member Ed DeBroeck, PE, managed and designed that project and will be leading KPFF's team putting together a design for Option 1.



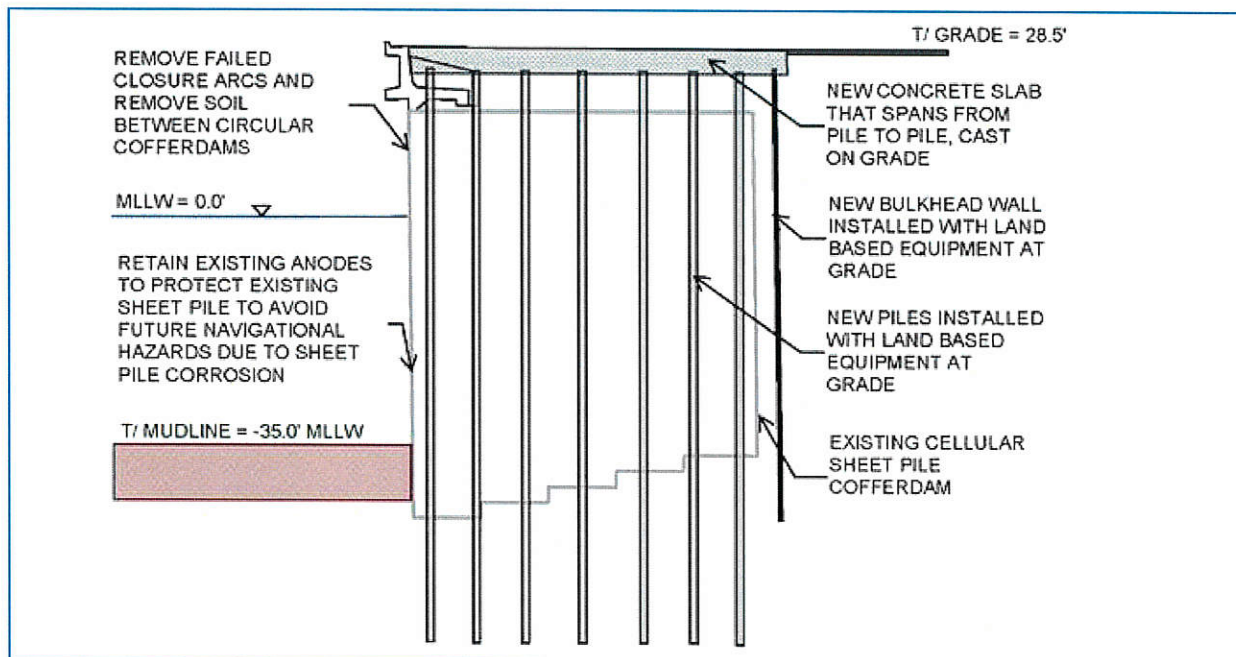
3. Draft Scope of Work

Option 2 – Dock Replacement w/ a Pile Supported Structure

For this option, we would propose conducting selective demolition of the existing dock after fully constructing the new pile supported dock at grade to take advantage of the access that the existing dock provides to the area. The new dock would be founded on piling that are installed at grade within the footprint of the existing dock.

A new concrete dock slab would also be installed at grade within the footprint of the existing dock and would be designed to span from pile to pile. A new sheet pile wall would then be driven at the backside of the new concrete slab to act as a new bulkhead wall at the backside of the wharf structure. Once these new structures are in place, the existing closure arcs could be selectively demolished to remove any navigational hazards that would exist from a corroded sheet pile structure, and the fill that falls into the berth as a result of the demolition would be dredged out to provide the desired depth at the berth. This would be a cost effective solution as all of the dock construction would be completed with land based equipment and there would be limited in-water work.

Our designated lead for the Option 2 design team is Scott Kuebler, SE. Scott has designed several pier and wharf structures and recently completed the design of the \$120M Pier 4 container terminal project for the Port of Tacoma. Scott is a member of the ASCE Ports & Harbors National Committee and is a voting member of the ASCE 61 Seismic Design of Piers and Wharves Committee, which publishes the industry standard for the seismic design of piers, wharves and bulkheads.



OPTION 2:

Leave existing dock in place and install new piles, concrete slab that spans from pile to pile, and a new sheet pile bulkhead to replace the existing dock structure. The advantage of this approach is that the piles, slab and bulkhead can all be installed with land based equipment. Normally, these wharf structures are installed with water based equipment, which can add significant cost. Once the new structure is in place, the existing structure can be removed as needed to avoid navigational hazards due to failed sheet piles. Based on the most recent condition assessment report, there do not appear to be any perforations in the sheet pile that would warrant immediate removal of the primary cofferdam sheet piles. It does appear, however, that the closure arcs are in worse condition and may warrant selective removal at this time.

**This option is presented not to demonstrate "the" solution for dock replacement, but merely to demonstrate the value that our team can provide to the community of Haines by bringing innovative ideas to the table for the community to deliberate.*

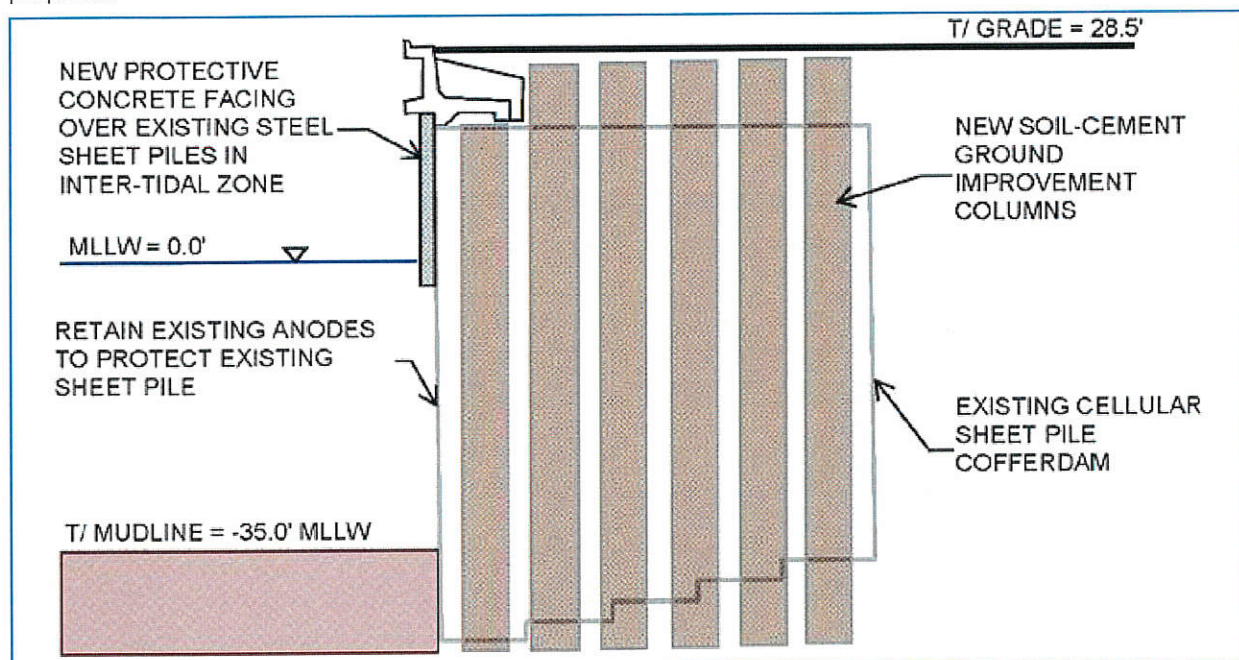
3. Draft Scope of Work

Option 3 – Innovative Design Solution

For this option, one concept we would like to share is a ground improvement option. This option reinforces the ground inside the existing cofferdams by mixing the soil with cement to create a large soil-cement block that would be self-supporting and would no longer rely on the circular sheet piles for support. In order to mitigate continued degradation of the existing steel at the face of the berth that would be left in place, the steel could be faced with poured in place concrete to protect it and keep it from falling apart and potentially creating a navigational hazard for vessels. The concrete facing also helps to prevent erosion of the soil-cement mixture that may occur thru holes within the abandoned cofferdam wall as the tide flushes in and out.

This design approach is similar to a project we completed for the US Navy at their Bangor submarine base facility in Washington State. The Navy had an older cofferdam structure that was corroding and in need of repair. KPFF designed the repairs and supported the construction effort. The Navy was very happy with the outcome of this project. Team member Bruce Erickson, SE managed and designed that project for the Navy and is our designated lead for the Option 3 design team.

We are presenting these options within this proposal not to demonstrate that we have “the” solutions for dock replacement, but merely to demonstrate the value that our team can provide to the community of Haines by bringing innovative ideas to the table for the community to deliberate. We fully expect that other ideas and options will surface through the public outreach process, and with each option that we present, we will provide an objective opinion of the costs, opportunities and risks associated with each one so that the community can decide for yourselves what makes the most sense for your future. More information about each of these example projects that are similar to the three options presented above can be found in Section 1 of this proposal.



OPTION 3:

Leave existing dock in place and install ground improvements in the form of soil-cement mixed columns. Cement is mixed with the existing soil using a special drill rig that mixes cement with soil to create a solid block of soil that is self supporting. Once the entire volume within the existing cofferdams has been treated with cement, it will behave similarly to the way it does today without the need for the steel cofferdam. A barrier will still need to exist between the treated soil and the water to prevent erosion, so the existing steel sheets in the inter-tidal zone will be covered with a new concrete facing. The steel below the inter-tidal zone can continue to be protected by anodes, which appear to be working well now in this zone, based on the most recent conditions assessment report.

**This option is presented not to demonstrate "the" solution for dock replacement, but merely to demonstrate the value that our team can provide to the community of Haines by bringing innovative ideas to the table for the community to deliberate.*

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3. Draft Scope of Work

Design Schedule

If we are selected for this project, we would start by collecting as much background data as possible. We would gather all of the available reports, drawings, geologic and geotechnical data, historic photos and basemaps available. We would also want to thoroughly understand the operations at the dock. This fact finding mission would be performed in person and would coincide with our first public meeting. The goal of the first meeting would simply be for us to listen – we would want to understand the community and stakeholder interests in this project – what are the goals? the expectations? the requirements for dock use during construction? the future desires for this facility?

We would simultaneously go through an outreach process – reaching out to tenants, stakeholders and the general public for specific input through one-on-one discussions (with the Borough's permission) and public computerized anonymous surveys.

We would take in all of this data, document it, and then start to generate various concepts for dock replacement, which would primarily be based on the input received through our outreach process. Once a few concepts have been created and vetted with Borough management, we would publish a packet for issuance to the public that would contain all of the results from our outreach process as well as dock replacement concept graphics along with pros and cons for each option.

This packet would be issued in advance of a second public meeting, where we would facilitate further discussion about the various options.

Once input from the second meeting is gathered, our team would further refine or develop new options as needed that would be presented at a third public meeting. The goal of the third meeting would be to select up to three preferred alternatives that could be carried forward to a 35% level of design. Results from our 35% design would then be shared and vetted with Borough management, and then packaged for distribution to the public to be discussed in a 4th public meeting, at which time our team would make a preferred alternative recommendation for the public to consider and deliberate.

TENTATIVE DESIGN SCHEDULE	
Notice to Proceed	September 28, 2016
Gather Data from Borough Archives	October 19 - 20, 2016
Conduct 1 st Public Meeting	October 19, 2016
Public Outreach Period	October 19 - November 30, 2016
Assemble Gathered Data and Develop Concept Dock Designs	October 24 - December 9, 2016
Issue info packet to Borough and Stakeholder Community	December 9, 2016
Conduct 2 nd Public Meeting	December 14, 2016
Refine Concept Dock Designs	December 19, 2016 - January 20, 2017
Issue 2 nd info packet to Borough and Stakeholder Community	January 20, 2017
Conduct 3 rd Public Meeting	January 25, 2017
Develop 35% level designs and ROM costs for the 3 preferred dock replacement options	January 30 - March 31, 2017
Present results of 35% level designs at 4th Public Meeting w/ design consultant's recommended alternative	April 12, 2017



4. Capacity of the Firm

KPFF Consulting Engineers

KPFF provides deep and diverse resources and exceptional technical expertise. More importantly, we have learned that successful interaction requires personal involvement by senior resources combined with energy, commitment, and ownership of project goals. KPFF has an experienced and skilled staff as well as the resources to take on projects of almost any size and deliver on the most constrained schedules. The firm is currently comprised of almost 1,000 professionals, including over 600 engineers. All of our offices work collaboratively together to promote ingenuity and growth in our professional practice. We have successfully leveraged our size and the innovative spirit of our people to create a critical mass of engineers required to accomplish projects of all sizes, budgets and schedules.

Through these characteristics, we bring unmatched passion and responsiveness to our work to meet the demanding goals of our clients. KPFF has a history of over 35 years of accomplishing projects for Port authorities and industrial waterfront sites, shipyards, cruise terminals, small boat harbors, marinas, and commercial developments. This history provides us with an excellent understanding of both the technical and operational issues that must typically be addressed on Port projects and will allow us to actively participate in the design activities. KPFF has over 37 years of experience with planning, designing, and managing construction of port and harbor projects for port authorities, other government agencies, shipping lines, stevedoring companies, industry, and private clients in the United States and abroad. Core capabilities include marine engineering, structural/civil engineering, wharf design, dredge design, construction management services, permitting, and the project management and planning experience to conduct these services efficiently. Our projects have included planning and design of a wide variety of marine terminals and the infrastructure to support those facilities.

Hart Crowser

Hart Crowser is a geotechnical engineering, environmental, and natural resources firm, headquartered in Seattle, Washington with six additional offices in Washington, Alaska, Oregon, and Hawaii. The company's staff of 115 includes highly experienced engineers and scientists who have completed thousands of small-to large-scale waterfront/marine projects throughout the Pacific Northwest and Alaska. Projects include: design/repair of bulkheads, demolition, replacement, and/or refurbishment of piers and docks, pavement, slope stability, earthquake loads, seismic effects such as liquefaction, and resolution of constructability issues. Hart Crowser's relevant experience includes several waterfront projects in SE Alaska, in addition to hundreds of port- and pier-related projects in the Pacific Northwest. Currently the firm is working with KPFF on a project in Skagway that involves demolition of an existing dock and replacement with both new dock structure and cellular cofferdams.

Haight & Associates

Haight & Associates, Inc., is licensed in the State of Alaska to provide Electrical Engineering services. The firm has been serving Juneau, Southeast Alaska and Alaska for the past 35 years with design and construction services. They maintain their office in Juneau, their services are offered throughout the state, but primarily in Southeast Alaska; and they have been participants in numerous projects in nearly every community. They have project experience in communities of similar size and character as Haines, including Skagway, Petersburg, and Wrangell, as well as their experience in Haines. Haight & Associates has a long history of involvement with docks and harbor projects. These projects include large and small docks/wharfs for large vessel moorage, marinas for small vessel moorage, fueling facilities, and upland terminals. The engineering services provided by the firm involves medium & customer voltage power distribution, shore power pedestals, lighting, communications, fuel pumps and controls, cranes, sewage pump stations and security cameras. Haight & Associates has experience with the electrical systems on many of the docks, wharfs, freight yards and bulk fuel facilities constructed in Southeast Alaska over the past 30 years. All of the HAI staff live in Southeast Alaska and routinely experience activities on the marine waterways. With this depth of experience, HAI is most responsive to marine type projects.



4. Capacity of the Firm

CAPACITY OF PROPOSED TEAM	Availability
KPFF - Bob Riley, PE, SE I Project Manager/Public Engagement	40%
KPFF - Ed DeBroeck, PE I Design Option Team #1	30%
KPFF - Scott Kuebler, PE, SE I Public Engagement/Design Option Team #2	30%
KPFF - Bruce Erickson, PE, SE I Design Option Team #3	50%
Hart Crowser - Garry Horvitz, PE, LEG	40%
Haight & Assoc. - Ben Haight, PE	40%

5. Experience with Public Meetings and User Groups

As a firm that regularly completes public projects for cities, counties and other public agencies, KPFF is very experienced in operating in a public forum. We are often asked to participate in public information meetings in various capacities in order to educate the public about proposed projects that have significant community impact.

Examples include the major restructuring of Mercer Street – a primary thoroughfare through the heart of Seattle with multiple stakeholder groups; Barlow Point – a 270 acre greenfield development along the Columbia River in Longview, Washington with many concerned citizens and businesses; the Swantown Fuel Dock – a new vessel fueling facility in Olympia, Washington with both project advocates and detractors; and the Gateway Intermodal Dock in Skagway, Alaska, with multiple tenants and vested stakeholders.

The project then continued into final design of the fuel dock facility, which also included a vessel pump-out station. Construction is anticipated to occur in the Fall of 2016. Scott also participated in five public meetings to present the process and results of the feasibility study and to explain the selected design concept.

All of these projects required us to interface with the public on behalf of a public agency in order to educate and inform the public about the technical, fiscal and operational impacts of these projects. The public faces we put forward are usually Principals at KPFF, who have the most project knowledge and are effective communicators.

As discussed in Section 3 of this proposal, KPFF is proposing to put forth two Principals to engage with the Haines community, Bob Riley and Scott Kuebler. Both Bob and Scott are seasoned professionals with many years of experience in completing projects for public agencies. Our strategies for interfacing with the public are explained in Section 3 of this proposal. We would use these strategies in Haines to build trust within the community and work towards consensus around a preferred solution for replacement of the Lutak Dock.



| APPENDIX RESUMES

Appendix - Resume



Bob Riley, PE, SE

KPFF | Project Manager/Public Engagement

KPFF is proposing Bob Riley to manage the Port Consultant project. Bob is well suited for this role, having over 20 years of engineering experience and specializing in the design of marine infrastructure. He is a licensed Professional Engineer in Alaska, and is the co-leader of the Marine Structural Group at KPFF's Special Projects Division. Bob will remain in his role as project manager for the entirety of the contract. Bob has years of experience leading multi-disciplined teams to complete planning and engineering projects.

Bob's relevant project experience includes:

Gateway Intermodal Dock Reconstruction, Skagway, AK

Bob is the Project Manager for the design and permitting of this new wharf project for the Municipality of Skagway (MOS). The MOS is replacing its Ore Terminal facility, which currently services multiple industries, including barged cargo, mined ore exports, bulk fuel and cruise passengers.

City of Ketchikan Berth 1 Rehabilitation, Ketchikan, AK

Bob was the Project Manager for this multi-disciplined and multi-faceted project for the City of Ketchikan's main cruise dock. Bob worked with the City and project stakeholders, obtained needed permits from the USACE and other state regulatory agencies, provided overall management and direction to the team and provided support to the City during construction of the work. KPFF also provided full time on-site construction management throughout project construction. Three different contractors performed the different phases of work and all of the work had to be timed and coordinated to be completed during the cruise ship off-season.

SR-520 Floating Bridge Anchor Design, Seattle, WA

Bob was the Project Manager, Lead Designer and Engineer of Record for the \$55M anchor design for the 520 Floating Bridge between Seattle and Bellevue, Washington, which KPFF accomplished as part of a Design-Build contract with Kiewit-General-Manson. At 7,200 feet in length, the SR 520 bridge is the longest floating bridge in the world.

Pontoon Construction Facility, Aberdeen, WA

Bob managed a team of engineers to design the \$80M deep basin that was used to construct the concrete pontoons for the new SR 520 floating bridge in Seattle. Bob was the Engineer-of-Record for this project. The basin is 180 feet wide by 1,000 feet long along the Chehalis River in Aberdeen, Washington. The elevation of the basin is 9 feet below Mean Low Water and has a 30 foot tall steel stop-log gate that keeps the water out of the basin so that the pontoons could be constructed in the dry.

Education

BS, Architectural Engineering
University of Colorado at Boulder

Registrations

Civil Engineer - AK, WA, OR, CA, MA
Structural Engineer - WA, CA
LEED Accredited Professional

Professional Affiliations

American Society of Civil Engineers
ASCE - COPRI
American Institute of Steel
Construction

Areas of Expertise

- Multi-Discipline Project Management
- Port of Skagway Experience
- 15+ Years Working with Public Port Entities
- 10+ Years of Experience in the Remediation of Contaminated Waterfront Sites
- Experience Working Within the Constraints of Grant Funded Projects
- Cruise Dock Operations

HAINES BOROUGH ALASKA

Request for Proposals - Lutak Dock Design and Development Concepts



Bob Riley, continued

[Vigor Shipyard \[formerly Todd Shipyard\], Seattle, WA](#)

Bob served as the On-Site Engineer during the construction of this \$15M sediment remediation project for this busy shipyard in Seattle, Washington. In this role, he helped the selected Contractor to resolve project challenges on a daily basis. Vigor is located at the mouth of the Duwamish River. Vigor performed this work in advance of the proposed Duwamish River Superfund cleanup. The work also included construction of an upland stormwater collection and treatment system to provide source control to prevent future contamination of the remediated shoreline.

[Whatcom Waterway Cleanup and Waterfront Development, Port of Bellingham, Bellingham, WA](#)

Bob served as the primary Structural Engineer and Principal in Charge for KPFF for this \$25M sediment remediation project in Bellingham, Washington that was designed in conjunction with Gateway Team member Anchor QEA. The work will be performed in front of a busy boat repair yard and aggregate export facility.

[Terminal 91 Cruise Facility, Port of Seattle, WA](#)

Marine Engineer. KPFF was the prime designer for a two-berth, 140,000-square-foot two-story cruise facility located on Pier 91 at the Port of Seattle. Design included significant coordination and configuration of facilities for US Customs and Border Patrol, two cruise lines, passenger ticketing and baggage handling operations, service facilities in the passenger waiting areas, and stores/provisioning facilities.

Additional Experience in Alaska:

[Phase I Harbor Improvements - Bar Harbor South Marina Upgrade, City of Ketchikan, AK](#)

Project Manager for the replacement of 3 existing main walk floats, as the first phase of a multi-phase upgrade of the existing marina. KPFF provided structural and marine engineering services for procurement and installation of the new floats and removal of the existing floats.

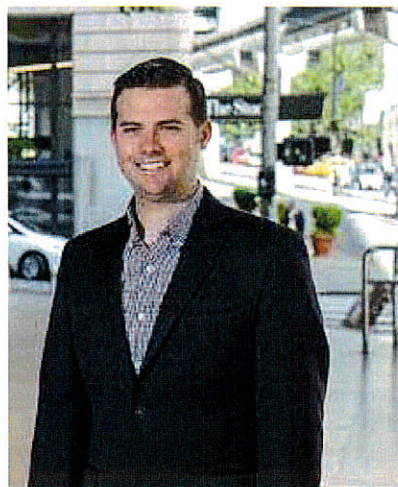
[Phase II Harbor Improvements - Bar Harbor North Float Repairs, City of Ketchikan, AK](#)

Project Manager for the inspection, testing, and recommendations for the repair of the existing deteriorated precast concrete floats that comprise the Bar Harbor North Marina. The project included visual inspection of the floats and testing of concrete cores, taken from selected concrete float surfaces, to determine the useful life of the damaged and undamaged floats and to identify and recommend solutions to repair the deterioration.

[Phase II Harbor Improvements, Thomas Basin Float No. 7 Replacement, City of Ketchikan, AK](#)

Project Manager for engineering services and documentation for the replacement of the Thomas Basin Float No. 7 and all associated utilities. The replacement float matches the configuration of the existing float. The project included procurement and installation of a 10-foot by 371-foot timber framed float and a 30-foot by 30-foot timber framed float that supports an existing gangway. The project also included full replacement of all electrical systems for the remaining 5 floats at the marina.

Appendix - Resume



Ed DeBroeck, PE

KPFF I Design Option #1 Team Lead

Ed DeBroeck has eight years of experience providing civil and structural engineering services for buildings, marine/waterfront structures, bulkhead walls & underwater sheet pile walls, construction support and management.

Ed's relevant project experience includes:

[Port of Gulf Port Terminal Redevelopment, Gulfport, MS](#)

Project Engineer for the retrofit of 3 existing wharfs into a 3,700' shipping container terminal. Ed designed the new substructure that would support the 100' gauge container cranes. The substructure included new concrete piles and concrete support beams. One berth included deteriorated cellular cofferdams with a king pile wall placed waterside to contain them. Ed designed the integration of the new structure with the existing structure utilizing the existing structure to its fullest potential saving construction schedule and budget. Ed also designed a 24' under water sheet pile toe wall at the face of the existing structure for berth deepening dredging.

[Pier 4 Reconfiguration, Tacoma, WA](#)

Lead structural engineer for the 1,750' long new pier structure to berth ultra large container ships [ULCS]. The new pier included an integrated bulkhead wall that was utilized to replace vertical concrete piles and was an integral part of the lateral resisting system. Ed also conducted a detailed condition assessment of the existing Pier 4 Structure, parts of which were included in the final configuration.

[Ocean Terminals Bulkhead Wall, Coos Bay, OR](#)

Lead engineer for the design of a new 59' tall customized tied back sheet pile wall to construct a 500' berth in Coos Bay around an existing timber dock. Ed lead the design of the sheet pile bulkhead structure complete with concrete pile cap, new mooring bollards and fendering. KPFF designed a new composite sheet pile out of HP sections and cold rolled sheets to simplify construction, eliminate the need for waler beams and to allow for a design that consisted of a single row of tie rods back to an anchor wall.

[SR 520 Bridge Replacement, Pontoon Moorage Feasibility Study & Conditions Assessment, Grays Harbor, WA](#)

Lead Structural Engineer. As part of the \$360 million Pontoon Construction Facility, Ed performed conditions assessments on all of the Port of Grays Harbor piers and wharves to evaluate possible temporary pontoon moorage locations. The structures were both concrete and timber and varied in age. One of the sites was used to moor the 360'x75' concrete pontoons.

Education

BS, Civil Engineering, Seattle University

Registrations

Civil Engineer - WA, CA

Areas of Expertise

- Multi-Discipline Project Management

HAINES BOROUGH ALASKA

Request for Proposals - Lutak Dock Design and Development Concepts

Appendix - Resume



Scott Kuebler, PE, SE

KPFF I Public Engagement/Design Option #2 Team Lead

Scott is a Principal and combines 19 years of experience in the design and project management of a wide variety of structures built in the marine environment, including condition assessments and retrofit construction of waterfront structures for deep water port facilities. Scott has spent the majority of his career working on marine projects that require extensive coordination between designers and the owner, in various roles from prime consultant project manager to specialty consultant. Scott is frequently engaged in highly unique structural designs that are to be built in challenging conditions. He has repeatedly demonstrated his ability to work with diverse groups of engineers, scientists, and contractors to develop pragmatic and cost effective structural designs that reduce project cost and schedule risk which results in a successful project.

Scott's relevant project experience includes:

Education

MS/BS, Civil Engineering, Washington
[Structural Emphasis] State University

Registrations

Civil Engineer - WA, CA, MS, OR
Structural Engineer - WA, OR, CA

Professional Affiliations

Structural Engineers Association of
Washington, Southwest Chapter

ASCE Ports & Harbors Committee

Voting Member, ASCE 61, Seismic
Design of Piers & Wharves Committee

American Institute of Steel
Construction (AISC)

Areas of Expertise

- Multi-Discipline Project Management
- 13+ Years Working with Public Port Entities

Pier 4 Reconfiguration Port of Tacoma, WA

Scott is serving as Prime Project Manager and Structural Engineer of Record on this \$120M project to remove and reconstruct an existing concrete wharf to accommodate up to two Ultra Large Container Ships and eight 100-foot gage, 24-box wide container cranes. Pier 4 has historically served much smaller container ships and barges and will be upgraded to handle 18,000 TEU vessels. Combined with adjacent Pier 3, the facility will provide 3,000 feet of deep-draft berth length along the Blair Waterway.

Port of Gulfport West Pier Wharf Upgrade, Gulfport, MS

Structural Engineer of Record for the upgrade of approximately 3,700 linear feet of existing wharf to accommodate new 100-foot gauge container cranes capable of serving Post-Pan max vessels as part of the Port of Gulfport Restoration Plan following Hurricane Katrina.

Washington State Ferries Timber Trestle Seismic Hazard Analysis and Vashon Trestle Seismic Rehabilitation, Puget Sound, WA

Scott served as Structural Engineer of Record and Project Manager for design of seismic upgrade improvements to the existing timber trestle at WSF's Vashon ferry terminal. Through a system-wide seismic hazard analysis performed by KPFF [performed as part of a larger Asset Management study], the Vashon trestle was identified as being at risk of complete collapse during a moderate seismic event. A performance-based design approach was used to analyze and design the seismic upgrade system. This is a "first of its kind" project for WSF and will serve as a prototype for future terminal improvement projects.

Vashon Trestle Seismic Rehabilitation, Port of Olympia, WA

Scott served as Prime Project Manager and Structural Engineer of Record for design of a new marine fueling facility. The project was initiated by performance of a feasibility study to evaluate options for development of a fueling facility on Port property. Through an alternatives analysis, the Swantown Marina was selected as the preferred site. Results of the study were published in a feasibility report and made available to the public. The project then continued into final design of the fuel dock facility, which also included a vessel pump-out station.

HAINES BOROUGH ALASKA

Request for Proposals - Lutak Dock Design and Development Concepts

Appendix - Resume



Bruce Erickson, PE, SE

KPFF I Design Option #3 Team Lead

Bruce Erickson has over 30 years of experience providing structural engineering services for a variety of waterfront, shoring, building, tunnel, and bridge projects. He is an expert in the design, evaluation and retrofit of bulkheads, seawalls, shoring and retaining wall systems. Bruce has designed docks, piers, and wharf structures for the US Navy, Washington State Ferries, and Puget Sound area ports. For the US Navy Bangor Delta Pier Cofferdam Repairs project, Bruce oversaw the creation and performance of a team that was able to produce a high-quality design for a technically challenging project on an accelerated schedule. For their successful completion of this design, Bruce's team received the highest rating of "exceptional" from the Navy.

Bruce's relevant project experience includes:

Education

BS, Civil Engineering, Northwestern University

Registrations

Civil & Structural Engineer - WA

Envision™ Sustainable Professional

Professional Affiliations

American Society of Civil Engineers
Structural Engineers Association of Washington

American Public Works Association
Deep Foundation Institute

Areas of Expertise

- Design of below-grade structures
- Design of soil shoring systems
- Deep foundations with ground improvements

US Navy A/E IDIQ for Waterfront Projects, Delta Pier Cofferdam Repairs, Kitsap County, WA

Project Manager for this project to coat the exterior of an existing steel sheet pile cofferdam with a 22-foot-high cast-in-place concrete fascia intended to protect the sheet piles from further corrosion. Scope includes assisting the Navy with environmental permitting and upgrading an existing cathodic protection system. Total fascia wall length is approximately 2,500 lineal feet, with roughly half of that under a pile-supported deck. Challenges inherent in constructing a concrete fascia below water and under a deck have led the team to conduct extensive interviews with local marine contractors and divers. Information obtained from these interviews has been incorporated into the design details, construction schedule and cost estimate.

Diablo Lake Barge Landing, Newhalem, WA

Engineer of Record. KPFF led a team to provide structural, civil, geotechnical, and mechanical engineering services for design of a new barge landing after the existing landing was destroyed by a landslide. As part of the concept development phase, it was determined that having the barge-to-shore ramp would be better operationally on the barge, and as able to accommodate this design change within schedule and budget. KPFF developed the ramp design to integrate with the new modular barge purchased by Seattle City Light.

Sound Transit University Link Slurry Walls, Seattle, WA

Structural Project Manager for the structural design of 2100 lineal feet of reinforced concrete slurry walls, with 3'-thick panels of up to 140' in depth, to create braced retaining walls up to 100 feet tall. In addition to soil loads, the walls were designed for approximately 70 vertical feet of hydrostatic head in order to hold back groundwater.

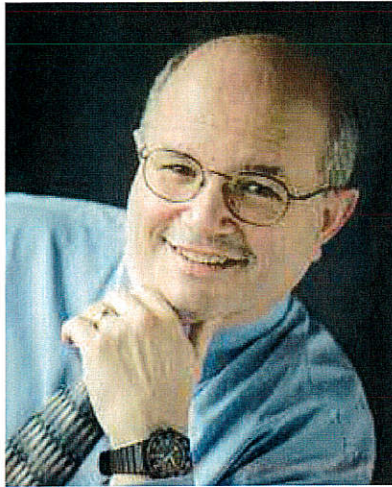
Pier 48 Seawall Assessment, Seattle, WA

Structural Project Manager for condition assessment and investigation of retrofit alternatives for an existing sheetpile seawall owned by WSDOT. The condition assessment involves identifying locations and extents of deterioration, taking measurements of remaining metal thickness, and removing coupons for strength testing. Investigation of retrofit alternatives includes evaluating options for wall repair versus installing a new seawall, and estimating the costs for the options.

HAINES BOROUGH ALASKA

Request for Proposals - Lutak Dock Design and Development Concepts

Appendix - Resume



Garry Horvitz, PE

HART CROWSER | Geotechnical Engineer

Garry Horvitz is a senior-level geotechnical engineer who is experienced with projects in SE Alaska. During more than 40 years of experience, he has developed unparalleled knowledge of geotechnical aspects of waterfront development, including piers and wharves, dredging, breakwaters, infrastructure, and upland facilities. Often Garry's projects involve redevelopment, renovation, or reconfiguration of existing facilities.

Garry's relevant project experience includes:

Gateway Intermodal Dock Reconstruction, Skagway, AK

Lead geotechnical engineer for design and construction of new intermodal and cruise ship berthing facilities. Involves demolition of an existing timber dock and replacement with both new dock structure and cellular cofferdams. Design is controlled by the seismic performance of the adjacent slopes and the potential to encounter hard pile driving conditions.

Cruise Ship Terminal (Berths 2 and 3), Ketchikan, AK

Geotechnical Project Manager for design of an offshore cruise ship berthing structure. Challenges included deep-water exploration in adverse weather conditions and designing a pile foundation system at a site with bedrock near mudline elevations. The new pier was to be constructed as a floating dock in 140 feet of water, making massive vertical guide piles necessary. The piles needed to be designed to be cored and fixed deep into the hard schist bedrock underlying a thin and variable veneer of glacial soils.

P-356, CVN Maintenance Pier Replacement, Naval Base Kitsap-Bremerton, WA

Project Manager for geotechnical and environmental services for a new supercarrier-class pier replacement, quay wall repair, and bulkhead repair on this Superfund site. Foundations consist of a series of augercast or driven grout piles for this design/build project. Special attention was paid to the use of "preloading" the site so the floor system could be supported as a slab-on-grade.

Pier 4 Reconfiguration, Port of Tacoma, WA

Principal-in-Charge of geotechnical engineering services to reconfigure the existing pier in order to widen the Blair Waterway to accommodate wider and deeper draft shipping. Work has included deep exploration for design of new heavy concrete piling as well as development of seismic design criteria. Many existing piles will be left in place to act as reinforcement for existing slopes to provide adequate stability under seismically induced liquefaction. Stone columns will reduce the potential for seismic instability of underpier slopes and structures.

Education

MS, Civil (Geotechnical) Engineering, Massachusetts Institute of Technology; BS, Civil Engineering, State University of New York at Buffalo

Registrations

Professional Engineer - AK, WA, OR, HI
Licensed Engineering Geologist, WA

Professional Affiliations

American Society of Civil Engineers [ASCE]

Coasts, Ocean, Ports and Rivers
Institute [COPRI]

Areas of Expertise

- Senior Geotechnical Engineer
Expert in Waterfront Facilities
- Experienced on projects in SE, AK
- Long-term successful working relationship with KPFF on similar projects

HAINES BOROUGH ALASKA

Request for Proposals - Lutak Dock Design and Development Concepts

Appendix - Resume



Benjamin Haight, PE HAIGHT & ASSOCIATES | Electrical Engineer

Benjamin Haight will lead the project electrical team. He will support the HAI staff effort, providing them with technical guidance and facilitate quality assurance. He has over 43 years of electrical engineering experience, and has been practicing in Alaska since 1975. He provides technical guidance to his staff and clients, oversees quality assurance of all project work, ensures compliance with contract requirements, and maintains vigilance of project and work schedules. Ben participates in the design and construction of electrical systems for harbors, docks and marinas, with experience extending through most of his career. The projects have involved lighting, power distribution, security cameras, metering, grounding, and various shore power configurations.

Benjamin's relevant project experience includes:

Education

BS, Electrical Engineering
Washington State University

Registrations

Electrical Engineer - AK

Professional Affiliations

National Society of Professional
Engineers

Association of Energy Engineers
Institute of Electrical Electronic
Engineers

Aircraft Owners & Pilots Association

Illuminating Engineers Society

National Fire Protection Association

National Society of Architectural
Engineers

US Green Building Council

Alaska Association of Harbormasters
& Port Administrators

Areas of Expertise

- Local Presence
- Haines Borough Experience
- Marine Experience

Lutak Dock, Haines Borough, AK

The electrical systems were evaluated as part of an overall survey of the dock in 2012. The survey included review of the conditions, performance, and usefulness of the lighting, electrical service, and power distribution.

Port Chilkoot Dock, Haines Borough, AK

This dock was recently renovated and provided with new electrical systems. The systems include LED lighting, power distribution, shore power for the small charter boat float, and power for miscellaneous equipment.

South Franklin Cruise Ship Dock Shore-Power

Several projects at this facility include the original construction of the dock with electrical service and distribution, lighting, and capstans. Subsequently, the dock was upgraded with bus parking area lighting; and cruise ship shore power. The lighting incorporated flood lights using marine grade fixtures and high pressure sodium lamps. The shore power system involved a festooning system with several hard usages, 15 KV cables supplying power to the ships, as well as the utility service to and on the dock. Ben was instrumental in the design; and provided construction services for all of the projects.

Ketchikan Berth III

This project included construction of electrical services, power distribution, and lighting. The facilities include renovation of the current Berth II dock for better access and security, installation of the Berth III floating dock, installation of Transient floating dock, replacement of the Casey Moran Harbor to facilitate the new floating docks. the construction of a pedestrian promenade around the Casey Moran Harbor, and the construction of a visitor center with public restrooms & passenger shelter. The electrical systems included new service and distribution of 480 and 208 volt power, large vessel shore-tie power on the Berth III dock, vessel shore-tie power in the Casey Moran Harbor, lighting throughout, and building systems.

HAINES BOROUGH ALASKA

Request for Proposals - Lutak Dock Design and Development Concepts



■ ACASS RATING

Architect-Engineer Contract
Administration Support System

US Navy - Bangor Delta Pier Project

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PERFORMANCE EVALUATION INCOMPLETE-RATED	ARCHITECT-ENGINEER
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DUNS Number: 042477729**1. A-E Contract Number:** N4425508D3008**2. Construction Contract Number:** N4425511R9005**3. Type of Evaluation:****a. Phase of Completion:** Final 100 %**b. Completion:** Engineering Services**c. Terminated For:** None**4. Project Number:** ST02007**5. Delivery Order No.:** 0007**6. Name and Address of A-E Contractor:**

K P F F INC

1601 5TH AVE # 1600

SEATTLE, WA 98101

USA

7a. Project Title and Location: Repair Dry Dock Cofferdam Sheet Pile, Building 7420**7b. Description of Project:** Clean & Repair Sheetpile surface & installation of concrete facing.**8. Name, Address and Phone Number of Office Responsible for:****a. Selection of A-E Contractor:** NAVFAC NORTHWEST

Phone: 360-396-1077

b. Negotiation/Award of A-E Contract: NAVFAC NORTHWEST

Phone: 360-396-1077

c. Administration of A-E Contract: NAVFAC NORTHWEST

Phone: 360-396-1077

d. Administration of Construction Contract: Bangor FEAD - T75A Tautog Circle Silverdale

Phone: 360-396-1576

9. A-E Contract Data:**a. Type of Work:** Design**b. Type of Contract:** Task Order under IDIQ**c. Project Complexity:** Difficult**d.(1) Contract or Task Order Initial Fee:** \$516,907**d.(2) Contract or Task Order Modifications:** No. 1 Amount: \$0**d.(3) Contract or Task Order Total Fee:** \$516,907**e. Contract or Task Order Award Date:** 05/17/2010**f. Negotiated Contract or Task Order Completion Date:** 09/30/2010**g. Actual Contract or Task Order Completion Date:** 09/30/2010**10. Construction Contract Data:****a.(1) Authorized Construction Cost:****a.(2) A-E Estimate for Bid Items Awarded:****a.(3) Award Amount:**

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b. Data at Time of Construction Completion: Completion Date:

Number Total Cost

b.(1) Construction Modifications

b.(2) Construction Modifications Arising from Design Deficiencies

11. A-E Liability: None**12. Overall Rating:** Exceptional**13. Recommended for Future Contracts?** Yes**14a. Name, Title and Office of Rating Official:**

Name: ERNEST BERG

Title: PROJECT MANAGER

Organization: NAVFAC NW

Telephone Number: 360-396-1077

Fax Number:

Email: ernest.berg@navy.mil

Date: 05/12/2011

15a. Name, Title and Office of Reviewing Official:

Name:

Title:

Organization:

Telephone Number:

Fax Number:

Email:

Date:

16. Quality of A-E Services by Discipline		
a. Disciplines	Design/Services	Construction
Architectural	Not Applicable	Not Applicable
Structural	Exceptional	Not Applicable
Civil	Not Applicable	Not Applicable
Mechanical	Not Applicable	Not Applicable
Electrical	Not Applicable	Not Applicable
Fire Protection	Not Applicable	Not Applicable
Surveying, Mapping, & Geospatial Information Svcs.	Not Applicable	Not Applicable
Cost Estimating	Exceptional	Not Applicable
Value Engineering	Not Applicable	Not Applicable
Environmental Engineering	Not Applicable	Not Applicable
Geotechnical Engineering	Not Applicable	Not Applicable
Master Planning	Not Applicable	Not Applicable
Hydrology	Not Applicable	Not Applicable
Chemical Engineering	Not Applicable	Not Applicable
Geology	Not Applicable	Not Applicable
Chemistry	Not Applicable	Not Applicable

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Risk Assessment	Not Applicable	Not Applicable
Safety/Occupational Health	Exceptional	Not Applicable
Hydrographic Surveying	Not Applicable	Not Applicable
	Not Applicable	Not Applicable
	Not Applicable	Not Applicable
	Not Applicable	Not Applicable

16b. Discipline, Name and Address of Key Consultants

Name	Address	Discipline
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17. Design Phase or Engineering Services

Attributes	Ratings
Thoroughness of Site Investigation/Field Analysis	Exceptional
Quality Control Procedures and Execution	Exceptional
Plans/Specs Accurate and Coordinated	Exceptional
Plans Clear and Detailed Sufficiently	Exceptional
Management and Adherence to Schedules	Exceptional
Meeting Cost Limitations	Exceptional
Suitability of Design or Study Results	Exceptional
Solution Environmentally Suitable	Very Good
Cooperativeness and Responsiveness	Exceptional
Quality of Briefing and Presentations	Exceptional
Innovative Approaches/Technologies	Exceptional
Implementation of Sm. Business Subcontracting Plan	Not Applicable
	Not Applicable
	Not Applicable
	Not Applicable

18. How Many 100% Final Resubmittals Were Required Because of Poor A-E Performance? 0**19. Construction Phase**

Attributes	Ratings
Plans Clear and Detailed Sufficiently	Not Applicable
Drawings Reflect True Conditions	Not Applicable
Plans/Specs Accurate and Coordinated	Not Applicable
Design Constructability	Not Applicable
Cooperativeness and Responsiveness	Not Applicable
Timeliness and Quality of Processing Submittals	Not Applicable
Product & Equipment Selections Readily Available	Not Applicable
Timeliness of Answers to Design Questions	Not Applicable

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Field Consultation and Investigations	Not Applicable
Quality of Construction Support Services	Not Applicable
	Not Applicable
	Not Applicable
	Not Applicable

20. Remarks**Small Business Utilization**

Does this contract include a subcontracting plan? No

Is small business subcontracting under this contract included in a comprehensive small business subcontracting plan? N/A

Is small business subcontracting under this contract included in a commercial small business subcontracting plan? N/A

Date of last Individual Subcontracting Report (ISR) / Summary Subcontracting Report (SSR): N/A

Rating Official Remarks: KPFF did an overall exceptional job on this contract. Responses to NAVFAC requests were quick & accurate. Schedules were always met on time. The KPFF team demonstrated an innovative approach to the problems associated with this complicated schedule stretching over three in water work seasons. KPFF delivered a quality product in their construction plans, specifications, construction schedule and cost estimate.

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